Rhodora

JOURNAL OF THE

NEW ENGLAND BOTANICAL CLUB.

Conducted and published for the Club, by

BENJAMIN LINCOLN ROBINSON, Editor-in-chief.

FRANK SHIPLEY COLLINS
MERRITT LYNDON FERNALD } Associate Editors.
HOLLIS WEBSTER

WILLIAM PENN RICH
EDWARD LOTHROP RAND } Publication Committee.

Vol. 18. February, 1916. No. 206.

CONTENTS

Plants of Matinicus Island. *W. L. McAtee* 29

The Name of the Red Oak. *C. S. Sargent* 45

Staminody of Petals in Amelanchier. *C. A. Weatherby* . . 48

Anchusa in New England. *J. Francis Macbride* 50

A pubescent Form of Salix Uva-ursi. *M. L. Fernald* . . . 52

Boston, Mass.
1052 Exchange Building.

Providence, R. I.
Preston and Rounds Co.

RHODORA.—A monthly journal of botany, devoted primarily to the flora of New England. Price, *$1.50* per year (domestic and foreign); single copies 15 cents. Prices of Volumes 1 and 2 (1899 and 1900) on application. All remittances by check or draft, except on Boston or New York, must include ten cents additional for cost of collection. Notes and short scientific papers, relating directly or indirectly to the plants of the northeastern states, will be gladly received and published to the extent that the limited space of the journal permits. Forms will be closed five weeks in advance of publication. Authors (of more than one page of print) will receive 25 copies of the issue in which their contributions appear. Extracted reprints, if ordered in advance, will be furnished at cost.

Address manuscripts and proofs to
B. L. ROBINSON, 3 Clement Circle, Cambridge, Mass.

Subscriptions, advertisements, and business communications to
W. P. RICH, 300 Massachusetts Avenue, Boston, Mass.

Single copies may be had from
E. L. RAND, Corresponding Sec'y N. E. Botanical Club,
1052 Exchange Building, Boston, Mass.

Entered at Boston, Mass., Post office as Second Class Mail Matter

---

KEY TO NEW ENGLAND TREES, Wild and Commonly Cultivated, based primarily upon leaf characters, by J. FRANKLIN COLLINS and HOWARD W. PRESTON. Price 40c. net. PRESTON & ROUNDS Co., Providence, R. I.

CARD-INDEX OF NEW GENERA, SPECIES AND VARIETIES OF AMERICAN PLANTS, 1885 TO DATE.

For American taxonomists and all students of American plants the most important supplement to the Index Kewensis, this catalogue in several ways exceeds the latter work in detail, since it lists not merely the flowering plants, but pteridophytes and cellular cryptogams, and includes not merely genera and species, but likewise subspecies, varieties and forms. A work of reference invaluable for larger herbaria, leading libraries, academies of sciences, and other centers of botanical activity. Issued quarterly, at $15.00 per 1000 cards.

GRAY HERBARIUM of Harvard University,
Cambridge, Mass., U. S. A.

CHECK LIST OF GRAY'S MANUAL, 7th EDITION, compiled by M. A. DAY. Leatherette. Pocket size. Invaluable for collector's memoranda and herbarium records. Published and sold by the GRAY HERBARIUM, Cambridge, Mass. Price postpaid 20 cts. each. Ten copies $1.50.

BOTANICAL BOOKS. The undersigned will sell cheap, or exchange for Books on BIRDS or INSECTS his present supply of Books treating of Plants, including complete sets of "Rhodora" and Contributions from U. S. National Herbarium.

JOHN D. SHERMAN, JR.,
403 Seneca Avenue, Mt. Vernon, N.Y.

Advertisements of Nurserymen and Dealers in Botanical and other Scientific Publications are inserted in these pages at the following rates per space of 4 in. by 3-4 in. 1 year $4.00, 6 months $2.50.

Rhodora

JOURNAL OF

THE NEW ENGLAND BOTANICAL CLUB

Vol. 18. February, 1916. No. 206.

PLANTS COLLECTED ON MATINICUS ISLAND, MAINE, IN LATE FALL, 1915.

W. L. McAtee.

While on official business for the United States Biological Survey, the writer spent two weeks (October 26 to November 7, 1915) on Matinicus Island, Maine. Weather conditions hampering the work planned, much of the time was employed in collecting plants, and specimens were taken of all vascular species observed.

Matinicus Island, about 2 miles long and of varying width, has an area of 720 acres. It is 18 miles out from Rockland, and appears to have a greater variety of vegetation than any of the other islands that far from the mainland. The shores are mostly rock bound, but there are three sand beaches extensive enough to furnish favorable habitat for sand-loving plants. Although the general surface of the island is well elevated, there are numerous bogs and marshes, and at least two extensive deposits of peat, sections of both of which are exposed at the shore.

The plants that fix the character of the landscape on Matinicus are the abundant spruces, and the low grasses (*Agrostis*, *Poa*) that so largely make up the splendid turf that covers most of the unwooded areas. Shrubs that are almost omnipresent in the woods are blueberry, huckleberry, and bunchberry, and outside, bayberry and juniper. Certain situations have very characteristic assemblages of plants, as the sandy beaches with *Ammophila*, *Atriplex*, and *Salsola*, the gravelly beaches with *Mertensia maritima*, *Arenaria peploides robusta*, and *Polygonum fowleri*, the boulder beaches or rocky shores with *Lathyrus maritimus*, *Oenothera muricata*, *Coelopleurum*, *Ligusti-*

cum, Glaux, Triglochin, and *Spartina.* The bogs have *Chiogenes, Vaccinium oxycoccos,* various sedges and rushes, skunk cabbage, and *Nemopanthus.* Habitats for aquatic plants on Matinicus are very limited, there being only two ponds. One is artificial and contains one intentional and probably other accidental introductions. The natural conditions for aquatic plants probably are well represented by Black Duck Pond, a small shallow pool pent up by the highest beach ridge and fed by seepage from springy ground. The plants occurring here are *Sparganium angustifolium, Potamogeton oakesianus, P. epihydrus, Scirpus occidentalis,* and an interesting submerged *Juncus* (*articulatus*).

Plants evidently without ecologic niches are *Equisetum arvense* and *Viburnum cassinoides,* both being found on shore, in marshes, pastures and woods.

Observations were necessarily incomplete because of the season at which the island was visited. Much more could be learned at a more favorable time of year. However, botanizing in late fall is not without its peculiar advantages. For instance the number of plants that were found in bloom at this northern locality during the first week of November was surprising. There were no fewer than 53 dicotyledonous plants flowering; how many monocots there may have been was not ascertained — *Spiranthes cernua* was the only conspicuous one. The 53 species mentioned represent 20 families; Compositae include 20 of the species, Cruciferae 5, and Leguminosae, Violaceae, and Labiatae 3 each. In how many cases blossoming should be regarded as a secondary autumnal anthesis is uncertain, but probably in only 7 of the 53 species. For the others the season was normal or an extension of the normal due to the unusually prolonged mild weather.

The total number of species of vascular plants obtained is 217 representing 52 families. The Compositae have 29 species, the Gramineae 18, Rosaceae 18, Ericaceae 12, Cyperaceae 10, and the Pinaceae, Polygonaceae, Caryophyllaceae and Labiatae 7 each. Seventeen families are represented by only a single species each. Besides the species actually collected by the writer, the following were credibly reported from the island: *Larix laricina* (Du Roi) Koch (the only known tree cut down a few years ago), *Acorus calamus* L. (the rootstocks sugared for sale), *Erythronium americanum* Ker, *Drosera rotundifolia* L. (used for healing sore lips), *Monotropa uniflora* L., and *Eupatorium perfoliatum* L.

Corroborative testimony is to the effect that most of the cleared portions of the island were once covered by a dense stand of yellow birch and rock maple. Only one maple (doubtfully native) now remains.

The only publications dealing with the plants of Matinicus Island are the following: (1.) by Arthur H. Norton: "Some noteworthy plants from the islands and coast of Maine." (RHODORA, 15, pp. 137–143, August, 1913), which records *Sparganium angustifolium* Michx., *Euphorbia polygonifolia* L., *Empetrum nigrum* L. and *Teucrium canadense littorale* (Bickn.) Fernald, two of which are additional to the following list; and (2.) "The genus Euphrasia in North America" (RHODORA, 17, pp. 181–201, October, 1915), wherein *Euphrasia purpurea*, var. *farlowii* forma *iodantha* n. f. is described from a specimen collected on Matinicus by A. H. Norton.

LIST OF SPECIES.[1]

POLYPODIACEAE.

POLYPODIUM VULGARE L.— Common on moss-covered rocks in woods.

PTERIS AQUILINA L.— Very common; only a few protected plants remaining green.

ASPIDIUM CRISTATUM (L.) Sw.— Frequent along woodland paths.

ASPIDIUM SPINULOSUM (O. F. Müller) Sw.— Common along woodland paths; a few plants long established in a well curb; var. AMERICANUM (Fischer) Fernald also collected.

DICKSONIA PUNCTILOBULA (Michx.) Gray.— In wet shady woods.

ONOCLEA SENSIBILIS L.— Common in marsh near beach.

OSMUNDACEAE.

OSMUNDA REGALIS L.— Common; all plants browned by frost.

OSMUNDA CINNAMOMEA L.— "BUCKHORN."[2] Common in swamps.

EQUISETACEAE.

EQUISETUM ARVENSE L.— "MARE'S TAIL." Common.

---

[1] Identifications of the plants here listed were either verified, or as in a majority of cases, originally made by Professor M. L. Fernald to whom the writer is greatly obliged.

[2] The English names cited are those actually in local use which are not often noted in manuals.

LYCOPODIACEAE.

Lycopodium clavatum L.—"Evergreen." Only one colony found along dry fence row under spruces.

PINACEAE.

Pinus strobus L.—One small deformed tree found in a rocky pasture.

Pinus rigida Mill.—Numerous gnarled trees present on a rocky hill near harbor and on Northeast Point. At the latter locality, in particular, the trees are badly deformed and numbers have been killed by the wind.

Picea canadensis (Mill.) B. S. P.—"Cat, Skunk or Blue Spruce. Abundant.

Picea rubra (Du Roi) Dietr.—"Common, White, or Yellow Spruce." Abundant.

Abies balsamea (L.) Mill.—Rather common but local.

Juniperus communis L. var. depressa Pursh.—Abundant, full of fruit.

Juniperus horizontalis Moench.—Local; three colonies found. Called "Ground or Running Cedar." This species is often collected on ledges and rocky headlands, but its habitat on Matinicus is pastures; where it creeps and at times almost conceals itself among the grasses. This habit probably suggested the name "Slink weed" cited by Norton. On Monhegan Island, it is known as "Trailing Yew."

TYPHACEAE.

Typha latifolia L.—Occupies one large marsh near old harbor almost exclusively and is scattered elsewhere.

SPARGANIACEAE.

Sparganium americanum Nutt.—In Ice Pond; mature fruit.

Sparganium angustifolium Michx.—In Ice and Black Duck Ponds; mature fruit.

NAIADACEAE.

Potamogeton oakesianus Robbins.— In Ice and Black Duck Ponds.

Potamogeton epihydrus Raf.— In Black Duck Pond.

Potamogeton pusillus L.— In Ice Pond; mature fruit and winter buds.

Zostera marina L.— In protected coves and tidepools; in latter stunted scarcely exceeding 20 cm. in length.

JUNCAGINACEAE.

Triglochin maritima L.— In crevices, rocky shore; mature fruit.

GRAMINEAE.

Panicum huachucae Ashe.— In wet peaty pasture, mature fruit, Nov. 2; on exposed shore, plants only 4.5 cm. long, fruits fallen, October 30.

Setaria glauca (L.) Beauv.— In gardens; mature fruit.

Anthoxanthum odoratum L.— Mature fruit.

Hierochloë odorata (L.) Wahlenb.— "Indian or Sweet Grass." Common in a marsh near beach, lighter green than surrounding vegetation. Formerly used by Indians for basketry; used by present inhabitants to repel clothesmoths.

Phleum pratense L.— Here the name "Herds grass" is actually in use.

Agrostis alba L.— Abundant. Var. maritima (Lam.) G. F. W. Mey. also collected; mature fruit.

Agrostis hyemalis (Walt.) B. S. P.— Fruit mostly fallen.

Calamagrostis canadensis (Michx.) Beauv. — Common in marshes; mature fruit.

Ammophila arenaria L. "Thatch," a name introduced from England. An extensive colony on sandy northeastern shore; mature fruit.

Spartina michauxiana Hitchc.— In strict clumps on rocky shore; mature fruit.

SPARTINA PATENS (Ait.) Muhl.— About edges of tide pools rocky shore; mature fruit.

DANTHONIA SPICATA (L.) Beauv.— Common; glumes empty.

POA ANNUA L.

POA PRATENSIS L.— Both common.

GLYCERIA CANADENSIS (Michx.) Trin.— Bogs; glumes empty.

AGROPYRON REPENS (L.) Beauv.

AGROPYRON TENERUM Vasey.— Both with mature fruit.

ELYMUS VIRGINICUS L.— "WILD OATS"; mature fruit.

CYPERACEAE.

ELEOCHARIS OBTUSA (Willd.) Schultes.— Common; mature fruit.

ELEOCHARIS TENUIS (Willd.) Schultes.— Mature akenes exposed.

SCIRPUS OCCIDENTALIS (Wats.) Chase.— In Black Duck and Ice Ponds; mature fruit.

SCIRPUS CYPERINUS (L.) Kunth.— Common in bogs; mature fruit.

ERIOPHORUM VIRGINICUM L.— Common in bogs.

RYNCHOSPORA ALBA (L.) Vahl.— Mature fruit.

CAREX STELLULATA Good. var. EXCELSIOR (Bailey) Fernald.

CAREX PAUPERCULA Michx. var. IRRIGUA (Wahlenb.) Fernald.— Abundant in bogs.

CAREX OEDERI Retz. var. PUMILA (Cosson & Germain) Fernald.

CAREX LURIDA Wahlenb.— All species of *Carex* had mature fruit.

ARACEAE.

SYMPLOCARPUS FOETIDUS (L.) Nutt.— Spathes ready for the spring opening were numerous in some of the bogs.

JUNCACEAE.

JUNCUS BUFONIUS L.— Common along wet paths.

JUNCUS DICHOTOMUS Ell. var. PLATYPHYLLUS Wiegand.

JUNCUS BALTICUS Willd. var. LITTORALIS Engelm.— On wet rocky shore.

JUNCUS EFFUSUS L. var. COMPACTUS Lejeune & Courtois.—Common in bogs.

JUNCUS BREVICAUDATUS (Engelm.) Fernald.— In bogs.

JUNCUS ARTICULATUS L.— In bog. An interesting submerged form[1] is abundant in Black Duck Pond. All species of *Juncus* had mature fruit.

IRIDACEAE.

IRIS VERSICOLOR L.— Plants with mature capsules very common.

SISYRINCHIUM ANGUSTIFOLIUM Mill.— Numerous in dry rocky pasture; some seeds yet remaining in capsules.

ORCHIDACEAE.

HABENARIA CLAVELLATA (Michx.) Spreng.— Old plants with entire capsules numerous in bogs.

SPIRANTHES CERNUA (L.) Richard.— Common in flower, some plants under 7 cm. in height.

EPIPACTIS REPENS (L.) Crantz var. OPHIOIDES (Fernald) A. A. Eaton.— Basal leaves only of small plants collected.

SALICACEAE.

SALIX DISCOLOR Muhl.

SALIX PETIOLARIS Sm.

POPULUS TREMULOIDES Michx.— "POPPLE." In swamp and on rocky hillside.

MYRICACEAE.

MYRICA GALE L.— The most luxuriant plant observed was among rocks very near the sea.

MYRICA CAROLINENSIS Mill.— Abundant, full of fruit.

MYRICA ASPLENIFOLIA L.— Uncommon.

BETULACEAE.

BETULA LUTEA Michx.

BETULA ALBA L. var. PAPYRIFERA (Marsh.) Spach.— Of the birches this species tends to be restricted to dry situations and the other to wetter places.

---

[1] Identification confirmed by F. V. Coville.

Alnus incana (L.) Moench.

URTICACEAE.

Urtica lyalli Wats.— One colony on rocky shore; mature fruit.

POLYGONACEAE.

Rumex crispus L.— The common dock of fresh water marshes, etc.; mature fruit.

Rumex pallidus Bigel.— The beach dock; mature fruit.

Rumex acetosella L.— Common.

Polygonum fowleri Robinson.— Only one mat observed; on beach; immature fruit.

Polygonum aviculare L. var. littorale (Link) Koch.— On tennis court; flowers to immature fruit.

Polygonum hydropiper L.— In bogs; mature fruit.

Polygonum persicaria L.— "Heart's ease." In gardens, flowers to mature fruit. Decoctions of this plant and of pennyroyal are used as driving potions, as in measles and colds, also for pain in general.

CHENOPODIACEAE.

Chenopodium album L.— In gardens; mature fruit.

Atriplex patula L. var. hastata (L.) Gray.— Common along shore; mature fruit.

Salsola kali L.— On sandy beaches; mature fruit.

CARYOPHYLLACEAE.

Spergularia rubra (L.) J. & C. Presl.— The typical form occurs in dense tufts or colonies of short plants on bare banks along shore; occasionally one encounters a long lax variety referable to var. perennans (Kindb.) Robinson. Referred to this also is a compact fleshy mat collected in a wet peaty pasture; mature fruit.

Spergula arvensis L.— In gardens; immature fruit.

Sagina nodosa (L.) Fenzl var. glandulosa (Bess.) Asch.— Old plants, capsules empty.

Arenaria peploides L. var. robusta Fern.— Some large mats present on the beaches.

Stellaria borealis Bigel.— Mature fruit.

Stellaria media (L.) Cyrill.— Flowers to mature fruit.

Cerastium vulgatum L.— Common; flowers to mature fruit.

NYMPHAEACEAE.

Castalia odorata (Ait.) Woodville & Wood.— Ice pond; purposely introduced.

RANUNCULACEAE.

Ranunculus acris L.— Still in bloom everywhere in wet soil.

Thalictrum polygamum Muhl.— Akenes still hanging to old plants in marsh near beach.

Coptis trifolia (L.) Salisb.— "Yellow-root." On Sphagnum-covered knolls. Used in treatment of canker, sore-throat, and indigestion.

CRUCIFERAE.

Capsella bursa-pastoris (L.) Medic.— Gardens; flowers to mature fruit.

Cakile edentula (Bigel.) Hook.— "Wild pepper grass." Beaches; flowers to mature fruit.

Brassica nigra (L.) Koch.— Gardens; flowers to mature fruit.

Brassica campestris L.— Stubblefield; flowers and immature fruits.

Sisymbrium officinale (L.) Scop.— Gardens and flower-beds; flowers and immature fruits.

Cardamine pennsylvanica Muhl.— Young plants, submerged, Ice Pond.

SAXIFRAGACEAE.

Ribes hirtellum Michx. var. calcicola Fern.— "Skunk currant." A few leaves left on the bushes.

ROSACEAE.

Spiraea latifolia Borkh.— Many leaves persisting on sheltered plants.

Spiraea tomentosa L.— A few leaves still hanging.

Pyrus communis L.— A young tree along a stone wall, undoubtedly escaped, had very stiff and thorny branches.

Pyrus malus L.— Numerous escaped trees.

Pyrus arbutifolia (L.) var. atropurpurea (Britton) Robinson.— "Shore berry." Common in swamps; full of fruit.

Pyrus americana (Marsh.) DC.— "Roundwood or Roundwood Tree." One tree in spruce woods, and several on an open rocky hillside.

Amelanchier oblongifolia (T. & G.) Roem.— "Wild pear."

Fragaria virginiana Duchesne.— Numerous plants in flower in upland pasture.

Potentilla monspeliensis L.— Pastures and gardens; flowers to mature fruit.

Potentilla pennsylvanica L.— On bluff rocky shores; mature fruit.

Potentilla tridentata Ait.— Pastures.

Potentilla anserina L.— Among rocks near shore.

Rubus idaeus L. var. aculeatissimus (C. A. Mey) Regel & Tiling. — Common, some old dry fruit remaining.

Rubus pergratus Blanchard.— Common.

Rubus setosus Bigel.— The most common *Rubus;* immature (red) fruit rather plentiful.

Rubus procumbens Muhl.— In wet woods.

Rosa humilis Marsh.— Common; full of fruit. Leaves on some bushes still green.

Prunus pennsylvanica L.— On rocky hillside.

LEGUMINOSAE.

Trifolium pratense L.

Trifolium repens L.

Trifolium procumbens L.— "Shamrock." All three species of clover were in bloom.

Lathyrus maritimus (L.) Bigel.— Common, pods empty.

Lathyrus palustris L. var. pilosus (Cham.) Ledeb.— Less common than last.

GERANIACEAE.

Geranium robertianum L.— Seen only near shore, and under rose-bushes; grazed off elsewhere?

EMPETRACEAE.

Empetrum nigrum L.— "Pigeon Berry." "Heath." Rather widely distributed in bogs, and woods, but most abundant on bluffs near the sea.

Corema conradii Torr.— Common on rocky bluffs, tending to occupy a zone back of the *Empetrum* mats.

ANACARDIACEAE.

Rhus typhina L.— One plant among boulders on exposed beach.

Rhus vernix L.— "Mercury." Common in swamps; fruit present.

AQUIFOLIACEAE.

Ilex verticillata (L.) Gray.— "Dog berry." "Pigeon berry." "White alder." Common, full of fruit.

Nemopanthus mucronata (L.) Trel.— In bogs.

BALSAMINACEAE.

Impatiens biflora Walt. — "Celandine." Among buildings about harbor. Flowers to mature fruit; juice used in treating *Rhus* poisoning.

MALVACEAE.

Malva rotundifolia L.— Barnyards; flowers to mature fruit.

HYPERICACEAE.

Hypericum majus (Gray) Britton.— Mature fruit.

Hypericum canadense L.— Mature fruit; plants under 10 cm. high were found with 11 capsules, and under 4 cm. in height with 7 capsules.

VIOLACEAE.

Viola cucullata Ait.

Viola septentrionalis Green.

Viola primulifolia L.— This and the preceding two species were found in a wet peaty pasture, and in all stages from flower to mature fruit.

Viola pallens (Banks) Brainerd.— This is the common violet of shaded situations, but was not found in flower.

ONAGRACEAE.

Epilobium angustifolium L.— "Moose-tongue." A young plant was found in a clearing, and frayed remains of numerous old ones on a rocky hillside.

Epilobium adenocaulon Haussk.— With weeds near a store; mature fruit.

Oenothera muricata L.— "Scabious." On or near the beach; flowers to mature fruit. Used in making poultices for sores.

Oenothera pumila L.— Garden; mature fruit.

ARALIACEAE.

Aralia hispida Vent.— Bare stems found on rocky wooded hillside.

UMBELLIFERAE.

Cicuta maculata L.— Fruit remaining on old plants in marsh near beach.

Ligusticum scothicum L.— Found both in woods and among rocks along shore; mature fruit.

Coelopleurum actaeifolium (Michx.) Coulter & Rose.—"Wild parsnip." On the rugged sea bluffs it frequents, with its large leaves and the contrasted lacy white and green flowers, and the abundant brown fruits borne on stocky stems 2 inches in diameter at base, and from 4 to 5 feet high, this species appears a truly magnificent herb.

Heracleum lanatum Michx.—Fruits fallen.

Daucus carota L.—Still in flower.

CORNACEAE.

Cornus canadensis L.—Several plants seen in flower; one shoot with 5 whorls of leaves collected.

ERICACEAE.

Chimaphila umbellata (L.) Nutt.

Moneses uniflora (L.) Gray.—"Snowdrop."

Pyrola secunda L.—These three *Pyroleae* were scarce in rocky woods.

Kalmia angustifolia L.—"Mountain Laurel." Abundant; mature fruit.

Gaultheria procumbens L.—"Boxberry." Common in openings among spruce; immature fruit.

Chiogenes hispidula (L.) T. & G.—"Sugar plum," "Snowberry," "Moxie Vine." Common on sphagnum mounds.

Gaylussacia baccata (Wang.) C. Koch.—Abundant; fruit in all stages from green to ripe plentiful.

Vaccinium pennsylvanicum Lam.—Abundant; a few flowers seen; Varieties angustifolium (Ait.) Gray and myrtilloides (Michx.) Fern., also collected.

Vaccinium corymbosum L. var. amoenum (Ait.) Gray.—Common.

Vaccinium vitis-idaea L. var. minus Lodd. "Woods or Highland Cranberry." Common.

Vaccinium oxycoccos L.—"Hog Cranberry." Common in sphagnum. Fruit present; noticeably more speckled in appearance than large cranberry.

Vaccinium macrocarpon Ait.—"Bog or Marsh Cranberry."

Fruit present. Leaves of plants of bogs have 3 times more surface area than those of plants from open marshes. Grows in pools and marshes very near salt water.

PRIMULACEAE.

Lysimachia terrestris (L.) B. S. P.— Edge of ice pond; with numerous bulblets.

Lysimachia nummularia L.— "Myrtle." House yard.

Glaux maritima L. var. obtusifolia Fern.— In crevices rocky shore; mature fruit.

CONVOLVULACEAE.

Convolvulus sepium L. var. pubescens (Gray) Fern.— Unopened capsules remaining on dead vines, gravelly beach.

BORAGINACEAE.

Mertensia maritima (L.) S. F. Gray.— "Blue iris." Common; mats 5 to 6 feet in diameter on the beaches; flowers to mature fruit.

LABIATAE.

Scutelleria galericulata L.— Marsh near beach; seeds fallen; used as a nerve medicine.

Nepeta hederacea (L.) Trevisau.— In woods, uncommon.

Prunella vulgaris L.— "Blue Lucy." Common in pastures and boggy places; flowers to mature fruit.

Galeopsis tetrahit L.— Flowers to mature fruit.

Leonurus cardiaca L.— Near house, in flower; used to relieve pain.

Hedeoma pulegioides (L.) Pers.— Scarce; mature fruit.

Lycopus uniflorus Michx.— In wet places; mature fruit.

SOLANACEAE.

Solanum nigrum L.— Gardens; flowers to mature fruit.

SCROPHULARIACEAE.

Linaria canadensis (L.) Dumont.— Common, widespread; flowers to mature fruit; one plant only 6 cm. high bore ripe capsules.

Chelone glabra L.— Mature capsules remaining on plants in marsh near beach; used to induce sweating.

Veronica americana Schwein.

Rhinanthus crista-galli L.— Capsules remaining on old plants in marsh near beach.

PLANTAGINACEAE.

Plantago major L.— Door-yards; bruised leaves used in treating *Rhus vernix* poisoning.

Plantago decipiens Barneoud. — "Goose-tongue," "Nova Scotia Greens." Abundant in various situations near shore.

Plantago lanceolata L.— Common in yards; all plantains had mature fruit.

RUBIACEAE.

Galium claytoni Michx.— Submerged in Ice Pond, also threaded through rushes and sedges in bogs.

CAPRIFOLIACEAE.

Linnaea borealis L. var. americana (Forbes) Rehder.— "Cinnamon vine," "Eglantine." Abundant in woods and bogs; one plant seen in flower.

Viburnum cassinoides L.— "Tea-berry." Common.

Sambucus canadensis L.— "Stinking Elder." Common; one large clump retained most of its leaves and had an abundance of immature (red) fruit; one tree 4 inches in diameter near ground.

LOBELIACEAE.

Lobelia inflata L.— Edge of garden; in flower.

COMPOSITAE.

Solidago bicolor L.— Mature fruit.

Solidago sempervirens L.— Common along shore; flowers to mature fruit.

Solidago rugosa Mill.— Common in old fields and pastures; flowers to mature fruit; a plant under 10 cm. in height bore 10 flower heads. Var. villosa (Pursh) Fernald also collected.

Solidago nemoralis Ait.— Cultivated field; in full flower, on ripe akenes.

Aster lateriflorus (L.) Britton.— Common; in flower.

Aster novi-belgii L.— "Summer farewell." Abundant; flowers to mature fruit. Var. laevigatus (Lam.) Gray also collected.

Aster acuminatus Michx.— Leaves only.

Anaphalis margaritacea (L.) B. & H.— Common; involucres empty.

Gnaphalium uliginosum L.— Common in a bare rocky pasture; involucres empty.

Ambrosia artemisiifolia L.— Gardens; flowers to mature fruit.

Bidens frondosa L.— Edge of Ice Pond; mature fruit.

Achillea millefolium L.— Common; flowers to mature fruit.

Achillea occidentalis Raf.— Occasional among rocks, delicate and fern-like; flowers.

Anthemis cotula L.— "Stinking Mayweed." Barnyards; flowers to bare involucres.

Matricaria suaveolens (Pursh) Buchenau.— Among weeds near store; in flower.

Chrysanthemum leucanthemum L. var. pinnatifidum Lecoq & Lamotte.— In flower in rocky pasture.

Tussilago farfara L.— Basal leaves only; numerous in one locality on bare bank along shore.

Senecio sylvaticus L.— Fairly common; mature fruit.

Arctium minus Bernh.— Barnyards; in flower.

Cirsium lanceolatum (L.) Hill.— Near old houses and barns; flowers to mature fruit.

Cirsium arvense (L.) Scop.— In wet places and near shore.

Leontodon autumnalis L.— "Arnica." — Typical form and var. pratensis (Link) Koch. Common in gardens and fields; flowers to mature fruit.

Taraxacum officinale Weber.— Very common, flowers seen.

Sonchus asper (L.) Hill.— In gardens and fields; flowers to mature fruit.

Prenanthes trifoliolata (Cass.) Fern.— Basal leaves only; in woods.

Prenanthes altissima L.— Among rocks, along shore; in the axils of the withered leaves of thick stem there were many short clusters of flowers, giving the appearance of fresh flowers springing from a dead plant.

Hieracium aurantiacum L.— Common in a few fields.

Hieracium pratense Tausch.

Hieracium canadense Michx.— Gardens; all of the hawkweeds exhibited all stages from flowers to mature fruit.

Biological Survey, Washington, D. C.

THE NAME OF THE RED OAK.

C. S. Sargent.

In the one hundred and ninety-fourth issue of Rhodora (February 1915) I showed that the name *Quercus rubra* Linnaeus (*Species Plantarum*, 996) belonged to the tree which was later called *Quercus falcata* by Michaux and not to the tree which has always been called Red Oak in the northern states. This change of name is one of the most unfortunate which the study of the old specimens of American plants has made necessary, for the Red Oak is one of the very few North American trees which has not been burdened with a variety of surplus names. That Linnaeus did not understand the tree which he called *Quercus rubra* is further shown by the fact that in his herbarium are two sheets of American Oaks collected by Kalm which therefore might have been before him when the first edition of the *Species Plantarum* was published. The two sheets were labeled by Linnaeus "*rubra*." On the first sheet there is a branch with half-grown leaves and withered catkins of staminate flowers. The name "*palustris*" was written on this sheet by J. E. Smith. Judging by the truncate base of the leaves it is a specimen of *Quercus coccinea* rather than of *Q. palustris:* it certainly does not represent any form of the Red Oak. On the second sheet there is a branch with four fully grown leaves and a single detached leaf. This was also called "*palustris*" by Smith and also represents, I believe, *Quercus coccinea*. There are photographs of these specimens in the herbarium of the Arboretum.

The earliest description of the northern Red Oak appears to be that of Plukenet in the *Almagestum Botanicum* (p. 309, t. 54, f. 5, not f. 1 as quoted by Linnaeus) published in 1696. Catesby's *Quercus Caroliniensis virentibus venis muricata* (i. 21, t. 21, f. 1), judging by the figure of a single leaf and of an acorn also well represent the Red Oak. Linnaeus's "Quercus foliorum sinubus obtusis: angulis acutis seta terminatis, intermediis vix tridentatis, margine integerrimo" in the *Hortus Cliffortianus* (p. 448) is based on the description and figures of Plukenet and Catesby, and on a specimen presumedly from Clifford's garden now preserved in the British Museum. Of this specimen there is a photograph in the herbarium of the Arboretum. This is a leaf of the Red Oak and it was on this specimen and on the description in the *Hortus Cliffortianus* that Linnaeus based his *Quercus rubra*, var. β in the *Species Plantarum* which, as I suggested, in Rhodora last year, is our northern Red Oak.

As the name *Quercus rubra* Linnaeus must be transferred to the tree which later was called *Quercus falcata* by Michaux, the Red Oak of the southern states, another must be found for the common northern Red Oak. The Gray Oak, as Michaux called it, which I believe is only a variety of this tree and which is common in the north, was distinguished by him in his *Histoire des arbres forestières de l'Amérique septentrionale* as *Quercus ambigua*. This tree only differs from the more widely distributed and more common form of the Red Oak with broad shallow cups of the fruit by its usually smaller acorns with deeper cups. The two trees often grow together; in habit, bark and foliage they cannot be distinguished, and individual trees with fruit intermediate between the two in size and in the shape of the cups are not rare. Although the tree with the deep cups is most common along the northern border of the United States and in Canada, it extends into western New York and a specimen collected by Cocks in St. Tammany Parish, Louisiana, is clearly this northern tree.

There is some doubt about the correct name for the Gray Oak. The younger Michaux who first distinguished it called it *Quercus ambigua*. There was, however, an earlier *Quercus ambigua* used for a

Mexican species by Humboldt & Bonpland. This fact was recognized in the first English translation[1] of a part of Michaux's book and the name *Quercus borealis* was there substituted for it. Although the fact is not stated very clearly, this change was evidently made or suggested by Michaux himself, for the translator says,— "This (the name *ambigua*) which I have adopted in the French edition, circumstances have compelled me to change; MM^{rs}. Humboldt & Bonpland having previously applied it to an Oak of New Spain. I have therefore substituted the name *borealis,* as it grows further to the north than any of the Oaks of North America." It is probably right, therefore, to credit Michaux fils with the combination *Quercus borealis* which should be adopted for the Red Oak species, for although Humboldt & Bonpland's *Quercus ambigua* is now considered a synonym of another species it is not impossible, judging from their plate in the *Plantae Aequinoctiales,* that with fuller knowledge of the Mexican Oaks than we now possess it will be shown that it is a distinct species.

Quercus borealis being used as the name for the Red Oak, it is desirable to distinguish by a varietal name the tree with the large acorns and the broad shallow cups, that is the Red Oak, as all modern authors have understood it. There were two varietal names given to this tree in 1785,[2] Marshall's var. *maxima* and Lamarck's var.

---

[1] This first English translation of a part of the younger Michaux's *Histoire des arbres forestières de l'Amérique septentrionale* appears to be little known. It is not found in the catalogues of the libraries of the British Museum or in that of the Royal Gardens at Kew. Pritzel describes the first English edition of the work as being in four volumes, giving the date of publication as 1817–1819, and it is possible therefore that he considered this earlier translation as a first volume of Hillhouse's English edition, which is really in three volumes. It is an octavo volume of two hundred and sixty-eight pages without illustrations and is devoted entirely to the Oaks. The title-page differs from that of the Hillhouse edition only in the omission of the names of several scientific societies following the name of Michaux, in the difference of the date of publication which is 1817, the date of Hillhouse's edition being 1819, and in the place of publication which, although the book was printed in Paris, is given as Philadelphia where it was sold by Thomas Dobson-Solomon Conrad. Both of these editions were printed in Paris by C. D'Hautel, but the names of the booksellers are omitted from the title-page of the Hillhouse edition. There is a preface by Hillhouse to his edition dated Paris 1819, but there is no preface to this 1817 edition, and the English translation of Michaux's introduction has an entirely different phraseology in these two editions. I have not been able to discover the name of the translator of the 1817 fragment which was probably prepared in Paris and then abandoned on account of the appearance of the Hillhouse translation. That it was not made by Hillhouse would seem to be shown by the fact, although he placed the name of "*borealis*" at the head of the article on the Gray Oak he failed to change "*ambigua*" to "*borealis*" in the body of the article and made no reference to the reason for the change of name given in the 1817 edition. The same mistake occurs also in J. J. Smith's Philadelphia edition of 1865.

[2] The date on the title-page of the first volume of the *Encyclopedie Méthodique* is 1783, but it is stated in the Catalogue of the Library of the British Museum that this volume was issued in two parts and that the second part, which must have contained the article on the Oaks, did not appear until 1785.

latifolia. There is no means of knowing which was actually published first; and as there is an error in Lamarck's citation of synonyms and some vagueness in his description of the cup of the fruit, it seems best to take up Marshall's name as his description clearly refers to the common Red Oak.

If my idea that *Quercus borealis* and *Quercus rubra* of modern authors are varieties of one species, to be distinguished as such, is correct, the name of the species is *Quercus borealis* Michaux fils and the name and synonymy of the variety is as follows:

Quercus borealis, var. **maxima**, nov. comb.

Quercus rubra, β Linnaeus, *Spec.*, 996 (1753).

Quercus rubra Du Roi, Harbk. Baumz. ii. 265 (excl. syn. Linnaeus & Catesby, not Linnaeus, t. 5, f. 2 [1772]) and all later authors.

Quercus rubra maxima Marshall, Arbust. Am. 122 (1785).

Quercus rubra, α latifolia Lamarck, *Encycl. Meth.* i. 721 (excl. syn. Plukenet) (1785).

Arnold Arboretum.

STAMINODY OF THE PETALS IN AMELANCHIER.

C. A. Weatherby.

Last spring I saw, for the first time in the field, the little shad-bush with reduced petals which has been called *Amelanchier oblongifolia*, var. *micropetala* by Dr. Robinson,[1] *A. nantucketense* by Mr. Bicknell,[2] and a hybrid of *A. oblongifolia* and *A. stolonifera* by Prof. Wiegand.[3] Since this was my first sight of it, I examined it with more than usual care and presently noticed that, in many of the tiny petals, the margins were inrolled and of a yellowish hue for a certain distance on each side. Subsequent examination of the inrolled portion showed it to be thinner than the rest of the petal and of a different cell-structure; and, in the latter respect as well as in color, to be precisely similar to the walls of the anther. Moreover, it contained more or less granular matter

[1] Rhodora x. 33.

[2] Bull. Torr. Bot. Club xxxviii. 453.

[3] Rhodora xiv. 133.

which, under the microscope, proved to be indistinguishable in appearance from pollen-grains.

I have since examined the readily available herbarium material of the small petaled plant — about a dozen sheets in all, from Blue Hill in Milton, Mass., from Nantucket and from various localities in Connecticut. Every one shows the same condition to a greater or less extent. I have not seen the actual specimens from which Mr. Bicknell described *A. nantucketense,* but the fact that he speaks of the petals as "often involute"[1] indicates that it is not unlike the rest. The degree to which modification of the petals has progressed varies in different individuals and in different flowers on the same shrub — even in the same flower. Some are oblanceolate to obovate and show only an inrolling of parts of the margin; others possess more fully-formed anther-sacs and have a narrow claw and a short, sub-orbicular blade, suggestive of filament and anther in outline, but petaloid in texture; in still others, the lower part of the claw has the heavier texture of true filaments; and in a few, the whole has the texture of the true stamens and can be distinguished from them only by the broader and flatter filament, the longer anther-sacs and the broad connective, corresponding to the blade of the petal.

Such a series of structures could, of course, be produced in the comparatively common phenomenon of "doubling" — the transformation of stamens into petals. But in that case one would expect to find the usual number of normal petals in addition to the partially developed ones, and a reduction in the number of stamens corresponding to the number of the latter. No such condition appears. Whether modified or not, the petals are five and no more; and the number of stamens, though variable, as usually in *Amelanchier*, averages about the same as in normal flowers. It seems plain, then, that we have here a case of transformation of petals into stamens, and that to this teratological tendency is due the dwarfing of the petals in this puzzling plant. What the underlying cause of the tendency may be, I cannot now suggest. This note is published in the hope that others may be moved to make observations of the plant in the field, to see if any evidence of disease or other external cause can be found. I noticed none in my one meeting with the growing plant; but I was not then looking for it.

East Hartford, Conn.

---

[1] l. c. 454.

ANCHUSA IN NEW ENGLAND.

J. Francis Macbride.

The genus *Anchusa* is not included in any of the floras covering New England although it has been known locally for twenty years. *A. officinalis L.* was collected by Prof. J. F. Collins at Providence, Rhode Island, July 2, 1895. On October 8, 1897, Mr. Sidney Harris secured it on waste ground bordering the Fens, Boston; and September 20, 1899, Judge Churchill collected it on a "dump" at the beach at Fairfield, Connecticut. These three collections were referred to *Lycopsis arvensis* L., a plant which closely simulates, in aspect, *A. officinalis*. In Rhodora, iii. 214 (1901) Mr. Edward B. Chamberlain mentions the specimen from Providence under its correct name, and in the same publication [x. 154 (1908)], Mr. William P. Rich, in an entertaining article on "City Botanizing," in which he bases his observations on plants growing wild in Boston, records *A. officinalis* as occurring "on several gravelly banks in August and September." He indicates that he mistook it for *Lycopsis arvensis* L., and is indebted to Dr. E. H. Eames for the correct determination. The genera *Anchusa* and *Lycopsis* are, indeed, very closely related and some of the more recent European botanists have united them. Men who have treated the group monographically, however (and these include some of the greater botanical students) without exception maintain both genera. *Anchusa* as so far represented in America, at least, may be distinguished from *Lycopsis* (in addition to the straight corolla) by the character of a flat receptacle; the nutlets of *L. arvensis* are attached to a more or less elevated gynobase.

The following specimens, cited from the Gray Herbarium (Gr.) and the Herbarium of the New England Botanical Club (N. E.), seem to indicate that the plant is locally well established, particularly at Boston and at Fairfield, Connecticut. However, the fact that no additional stations are given for its occurrence in "The Flowering Plants and Ferns of Connecticut" 329 (1910), would lead one to believe that it is not inclined to spread rapidly, since, as observed above, Judge Churchill found it at Fair~~banks~~field as early as 1899.— Massachusetts: Back Bay region, Boston, Oct. 8, 1897, *Sidney Harris* (N. E.); Sept. 15, 1901, *W. P. Rich* (Gr.); June 23, 1903, *E. F. Williams* (Gr.); Oct. 9, 1906, *A. S. Pease* (N. E.); June 24, 1908, *C. H. Knowlton* (Gr. & N. E.). RHODE ISLAND: "north cove lands," Providence, July 2, 1895, *J. F. Collins* (N. E.). CONNECTICUT: "Dump" on the Beach, Fairfield, Sept. 20, 1899, *J. R. Churchill* (N. E. & Gr.); Aug. 17, 1900, *E. H. Eames* (N. E.) and July 8, 1907 (N. E.).

Another plant, very closely related to *A. officinalis*, was collected Sept. 7, 1903, by Dr. O. W. Knight on a railroad embankment at Bangor, Maine, and in RHODORA, vi. 91 (1904) he mentions this collection. Two years later Dr. Knight (l. c. viii. 72) wrote that the plant, "though not spreading seems to hold forth where first found by us." No later report seems to have been published, but if one may judge from *A. officinalis* L., there is little doubt about the plant becoming established. Therefore it seems advisable to call attention to the relationship of the two introductions. The Maine specimen was reported (l. c.) as *A. arvalis* Reichenb. This species has often either been reduced to *A. officinalis*, or ignored by makers of European manuals. However, Schinz & Thellung in Naturf. Ges. Zürich, liii. Heft. iv. 557 (1909), have treated Reichenbach's plant as a variety of *A. officinalis*, identifying it with *A. angustifolia* of Linnaeus. According to this disposition its name is *A. officinalis* L. var. *angustifolia* (L.) A. DC. Rouy, in Rouy & Foucaud's Flore de France, x. 288 (1908), also regarded *A. arvalis* as only a variety of *A. officinalis*, but he used Reichenbach's name varietally and referred *A. angustifolia* L. to another species. Schinz & Thellung, however, on the testimony of Rob. N. Rudmose Brown, who is monographing the genus, show that the identity of *A. angustifolia* L. Sp. Pl. 133 (1753) is with Reichenbach's species.

It seems to me that this disposition is justifiable. At least our European material shows that many intergrades occur between the two forms. The variety, typically, has a looser inflorescence, even the later flowers becoming remote in fruit, the leaves are more or less distinctly denticulate, and the calyx-divisions are less connivent over the fruit. The correct name, then, for the plant introduced at Bangor, Maine, is *Anchusa officinalis* L., var. *angustifolia* (L.) A. DC.

GRAY HERBARIUM.

A pubescent Form of Salix Uva-ursi.— The common matted willow, *Salix Uva-ursi* Pursh, of the granitic alpine summits of northern New England, the Adirondacks, and the region northward to Labrador has its small crowded leaves quite glabrous, glaucous beneath but dark green and lustrous above; so that the bearberry-like carpets make conspicuous glistening mats on the mountain crests. In the White Mountain region the shrub abounds on the Presidential and Franconia Ranges and is generally quite typical; but near the base of the western spur of Mt. Lincoln are considerable carpets which at once arrest the attention by their dull whitish color. Examination shows that in these colonies the foliage, instead of being glabrous, is canescent with a close somewhat arachnoid but persistent pubescence. In this character the pubescent shrub of Mt. Lincoln simulates some of the Arctic-alpine species of Gaspé, Newfoundland and Labrador, *S. cordifolia* Pursh for instance, but in all other characters it seems to be pure *S. Uva-ursi;* and the beautifully definite key-character, of glabrous foliage, which has so long separated it from some other species of the North now unfortunately becomes weakened. This extreme form may be called

Salix Uva-ursi Pursh, forma **lasiophylla**, n. f., foliis pubescentibus, pilis canescentibus plus minusve arachnoideis.

Leaves with more or less arachnoid canescent pubescence.— New Hampshire: granitic gravel and peaty slopes, western spur of Mt. Lincoln, Franconia, August 11, 1915, *Fernald*, no. 11,665 (type in Gray Herb.).— M. L. Fernald.

Vol. 18, no. 205, including pages 1 to 28 and plates 114 to 117, was issued 31 January, 1916.

IMPORTANT NEW BOTANICAL BOOKS

COULTER'S PLANT LIFE AND PLANT USES . . . . . . By **John Gaylord Coulter, Ph. D.**, Critic Teacher of Biology, University High School, Normal, Illinois.	$1.20
Edition with Cowles and Coulter's Spring Flora	1.50
COULTER'S BOTANICAL NOTEBOOK AND LABORATORY MANUAL . . . . By **John Gaylord Coulter, Ph. D.**	.36
With loose leaf binder	.72
COWLES AND COULTER'S SPRING FLORA . . . . By **Henry C. Cowles, Ph. D.**, Associate Professor of Plant Ecology, University of Chicago, and **John Gaylord Coulter, Ph. D.**	.60
Edition with Andrews's Practical Botany	1.50

DESCRIPTIVE CIRCULARS SENT ON REQUEST

AMERICAN BOOK COMPANY
New York **Cincinnati** **Chicago** **Boston**

HOME GROWN LILIES.

Fresh from Beds. Wild Flowers, Hardy plants of all kinds.
Send for catalogue

F. H. HORSFORD, Charlotte, Vt.

A YOSEMITE FLORA by Harvey Monroe Hall and Carlotta Case Hall. A descriptive guide, with keys. Includes most species of the Sierra Nevada Mountains. 282 pages, 11 plates, and 170 text-figures. Pocket-size. Attractively bound in flexible leather. Postpaid, $2.00 net.

PAUL ELDER & CO.
239 GRANT AVENUE, SAN FRANCISCO, CAL.

Mounting Papers, Driers, Genus Covers, Collecting Cases, Plant Presses

BOTANICAL CATALOG 91. DO YOU HAVE IT?

CAMBRIDGE BOTANICAL SUPPLY COMPANY
Laboratory . . . . WAVERLEY, MASS. . . . . *Equipment*
(Mention Rhodora)